

Amendments to the Drawings:

The attached sheet of drawings includes changes to FIG. 1. In FIG. 1, previously omitted words “(PRIOR ART)” has been added to the legend.

Attachment: Replacement Sheet

Annotated Sheet Showing Changes

REMARKS

Claims 1-3 have been amended to remove the informalities kindly pointed out by the Examiner. Claims 4-6 are new claims added to more concisely define the scope of the present invention in conformity with the U.S. style of claim drafting. Support for the amended claims and new claims can be found in the original claims and throughout the original specification. No new matter is introduced.

The Invention

The present invention relates to an isolating type self-oscillating flyback converter, which has the following main advantageous features over the prior art: (a) it has a smaller start current and (b) it can work normally under higher input voltages (see paragraph [0004]). The gist of the invention is the discovery that by replacing the resistor between the input terminal and the joint A (FIG. 1) with a resistors-capacitor complex (FIG. 2) or a resistor-inductance complex (FIG. 3) the resulting self-oscillating flyback converter can overcome several drawbacks existing in the prior art converters by relying on the aforementioned advantageous features. For convenience, the resistors-capacitor complex and the resistor-inductance complex are referred to as "soft start loop" in the present invention. It must be pointed out that the resistors-capacitor complex and the resistor-inductance complex are common elements found in many electronic circuits and they themselves do not have any intrinsic soft start effects. The fact that they have soft start effects in the present invention is not because they by themselves have any known intrinsic soft start effects, but because of their particular connections with the rest of the circuit (i.e., the overall topology of the circuit) of the converter according to the present invention. For example, if capacitor C3 in FIG. 2 were not connected to the ground, it would not have the observed soft start effect.

The Second 103(a) Rejection

The Examiner rejected claims 1 and 2 based on the converter depicted in FIG.1 (prior art) in view of the Hosoya (U.S. Pat. No. 4,208,705) reference. Apparently, the Examiner believed that any resistor-capacitor-resistor complex, such

as R4-C2-R5 in Hosoya, would intrinsically have the soft start effects achieved in the present invention. This belief is erroneous. In fact, in the present invention, if capacitor C3 in FIG. 2 were not connected to the ground as it is the case in Hosoya, the resistor-capacitor-resistor complex would not have the desired soft start effects to achieve the object of the present invention. Also, it was a mistake to name capacitor C2 in Hosoya as “a soft start capacitor” (see page 3, point 6 of the office action) because capacitor C2 does not have the soft start effect in Hosoya, nor was it intended there to have such effects.

Furthermore, claim 3 of the present application was rejected based on an official notice taken by the Examiner that “utilizing a series connected inductor to limit current was an old and known expedient in the power supply art.” (page 4, point 7 of the office action). Here, the Examiner equates the soft start feature of the present invention to a current-limiting function. It is erroneous because the present invention does not rely on a mere current-limiting function. If it were the case there would be no need to replace the resistor in FIG.1 with the resistor-inductance complex because it is well known in the art that a resistor itself is a current-limiting element.

Because the Examiner rejections of claims 1-3 were based on incorrect understandings of the facts of the case, they should be set aside.

Not a *Prima Facie* Case of Obviousness

As recently restated by the Supreme Court, “[a]s is clear from cases such as *Adams*, a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art,” (*KSR International Co. V. Teleflex Inc.*, 550 U. S. ____ (2007)). To demonstrate a *prima facie* case of obviousness, the Examiner must do more than just merely pointing out that several elements recited in the claim are individually known in the prior art. He must analyze whether there are any reasons to prompt skilled artisans in the art to bring together these known elements to arrive at the claimed subject matter. Although such analysis does not have to follow a rigid TSM test as recently rejected by the Supreme Court, it does not mean that the Examiner, like in the instant case, can make a *prima facie* case of obviousness without doing any such analysis at all. “Although common sense directs one to look with care at a patent application that

claims as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. This is so because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known" (*KSR International Co. V. Teleflex Inc.*, 550 U. S. ____ (2007)) (emphasis added).

Turning to the instant case, neither the resistors-capacitor complex nor the resistor-inductance complex has a known intrinsic soft start function achieved in the present invention to make it *prima facie* obvious to use them in the present invention. None of the references cited by the Examiner provides any reasons for using either of the complexes in the isolating type self-oscillating flyback converter in the way as employed in the present invention. In sum, Applicant respectfully submits that because the Examiner has not made a *prima facie* case of obviousness in the instant case, the claims as amended in the present application should be allowed.

Conclusion

For the reasons, as detailed above, that the rejections of the claims of the present invention were based on incorrect understandings of the fact and that a *prima facie* case of unpatentability has not be made by the Office, Applicant respectfully requests the reconsideration and withdrawal of the rejections. Allowance of the application is hereby earnestly solicited.

Respectfully submitted,



George G. Wang, Ph.D., Reg. No.: 41,419
Attorney for Applicant

Bei & Ocean
66 Hilltop Road
Millington, New Jersey

Telephone (908) 6049218